CLAIMS

WHAT IS CLAIMED IS:

1. A communication apparatus comprising:

a plurality of interfacing sections interfacing with links and each having a CAM, for routing or filtering according to information that is stored in the CAM, the links being used for accommodating VPNs, respectively;

a storage section for registering therein in advance a combination of identifiers of interfacing sections accommodating the VPNs therein individually, the interfacing sections being of the plurality of interfacing sections; and

a controlling section for requesting one of the interfacing sections to write routing information to a CAM of the one of the interfacing sections, the one of the interfacing sections being designated by an identifier which is registered in the storage section in association with a VPN to which the routing information is applied.

2. The communication apparatus according to claim 1, wherein

the controlling section comprehends contents of routing information written to the respective CAMs of the interfacing sections, and omits requesting for writing overlapping pieces of routing information to the CAMs when the routing information overlaps the contents of the written routing information.

3. The communication apparatus according to claim 1, wherein

the plurality of interfacing sections maintain uniqueness of each piece of routing information that is written to the respective CAMs of the plurality of interfacing sections.

4. A communication apparatus comprising:

a plurality of interfacing sections interfacing with links and each having a CAM, for routing or filtering according to information that is stored in the CAM, the links being used for accommodating VPNs, respectively; and

a controlling section for delivering, to all of the plurality of interfacing sections, routing information to be applied to the VPNs, wherein

the plurality of interfacing sections write routing information to their respective CAMs, the route information being of the delivered routing information and corresponding to the VPNs that are accommodated via the links.

5. The communication apparatus according to claim 1, further comprising a switching section for delivering a packet among the plurality of interfacing sections, the packet being a packet whose transmission source and/or destination is/are accommodated in one of the VPNs.

6. The communication apparatus according to claim 5, wherein

the plurality of interfacing sections and the switching section interface with different autonomous systems or segments in one of a data link layer and a transport layer, the different autonomous systems or segments being intervenient in all or part of the VPNs.

7. The communication apparatus according to claim 5, wherein

one or both of a function and a load of the controlling section is/are distributed to ports that are provided in the switching section and correspond to the plurality of interfacing sections.

8. The communication apparatus according to claim 5, wherein

the switching section delivers all of the routing information between the controlling section and the plurality of interfacing sections.

9. The communication apparatus according to claim 6, wherein

the switching section delivers all of the routing information between the controlling section and the plurality of interfacing sections.

10. The communication apparatus according to claim 7, wherein

the switching section delivers all of the routing information between the controlling

section and the plurality of interfacing sections.

11. The communication apparatus according to claim 1, wherein

the controlling section delivers routing information to the plurality of interfacing sections via a communication link.

12. The communication apparatus according to claim 4, wherein

the controlling section delivers routing information to the plurality of interfacing sections via a communication link.

13. A network interfacing device comprising:

an interfacing section interfacing with a link that is used for accommodating a VPN;

a communication processing section for performing routing or filtering relating to the VPN according to information that is stored in a CAM; and

a controlling section for writing routing information to the CAM, the routing information being delivered from an exterior and relating only to the VPN.

14. The network interfacing device according to claim 13, wherein

the controlling section maintains uniqueness of the information stored in the CAM.

15. The network interfacing device according to claim 13, wherein

the controlling section requests the exterior to supply routing information when a predetermined event has occurred, the routing information being used for updating the information stored in the CAM.

16. The network interfacing device according to claim 14, wherein

the controlling section requests the exterior to supply routing information when a predetermined event has occurred, the routing information being used for updating the information stored in the CAM.

17. The network interfacing device according to claim 13, wherein

the controlling section acquires the externally delivered routing information via a

port connected to the communication processing section, the port being one of ports that are provided in a switch realizing the routing or filtering in cooperation with other network interfacing devices.

18. The network interfacing device according to claim 14, wherein

the controlling section acquires the externally delivered routing information via a port connected to the communication processing section, the port being one of ports that are provided in a switch realizing the routing or filtering in cooperation with other network interfacing devices.

19. The network interfacing device according to claim 15, wherein

the controlling section acquires the externally delivered routing information via a port connected to the communication processing section, the port being one of ports that are provided in a switch realizing the routing or filtering in cooperation with other network interfacing devices.